

UNITED STATES DEPARTMENT OF AGRICULTURE
U.S. EXTENSION SERVICE
DIVISION OF AGRICULTURAL ECONOMICS

FRUIT AND VEGETABLE MARKETING

by

Chas. W. Hauck, Extension Economist
in charge, Fruit and Vegetable Marketing Section
June 1, 1950

There are 23 RMA projects dealing with fruit and vegetable marketing in 17 States and the three territories. As would be expected, the commodities covered and the types of educational programs started vary considerably in the different States and territories depending on local nature of the problems, the stage of development of the industry and the previous amount of educational activity and marketing services provided.

Of the 23 projects for which funds were approved for this current fiscal year, 8 commodity marketing projects in Arkansas, Maine, Massachusetts, Mississippi, North Dakota, New Hampshire, New York and Hawaii had been started the previous fiscal year and had been renewed. In this current fiscal year the program expanded with 15 new commodity projects of which 10 actually were started. The 10 States starting fruit and vegetable marketing extension work were Maryland, Mississippi, Rhode Island, Tennessee, Texas, Washington, Utah, Hawaii, and Puerto Rico. One project in Alaska was initiated on a part time basis for three months and has been inactive since the leader resigned. Four other projects in South Carolina, North Carolina, West Virginia and Virginia failed to be initiated following approval of projects and allocation of funds to the States. Now that more men trained in marketing are becoming available, it is anticipated that all these projects will soon be activated.

From a commodity standpoint, 17 States were conducting marketing educational work on one or more of six commodities. Apples received attention in five States. Three States and one territory included work on potatoes while six States were carrying on sweet potato marketing improvement programs. Attention was given to improving the marketing of cantaloups or watermelons in five States. Three States near to market and one that ships long distances conducted educational programs on marketing sweet corn. Four States included strawberries in their marketing projects. A wide range of other fresh fruit and vegetables received attention in eight States. Included are asparagus, lettuce, tomatoes, snapbeans, apricots, cherries, avocados, bananas, pineapple, papayas and flowers. Two States started extension programs on vegetables for processing.

The general character of extension marketing work on fruits and vegetables being conducted with RMA funds can be classified as to major emphasis in three types as follows: (1) Expanding and creating new market outlets which includes projects in New Hampshire, Utah, Puerto Rico and Hawaii; (2) Encouraging efficiency and orderly marketing to reduce waste, maintain quality and lower costs of distribution which includes projects in Massachusetts, New York, North Carolina, Rhode Island, South Carolina, Virginia; (3) Better grading, packing and handling of fresh produce. The projects classified in this group are in Arkansas, Maine, Maryland, Mississippi, North Dakota, Tennessee, Texas, Washington, West Virginia, Alaska and Hawaii.

Nearly half of the fruit and vegetable marketing projects dealt primarily with quality improvement directed to growers and first handlers of the produce. The other types of extension marketing work involved more contacts with distributors and retailers, particularly where the

producing area is near to consuming centers.

758645

Expanding and Creating New Market Outlets

The four States with RMA projects to expand and create new market outlets for fruits and vegetables have in each case considered the local problem and developed a unique approach to its solution. New Hampshire worked on three separate programs of this type (1) trying to develop markets for iceberg lettuce produced locally, (2) introducing new watermelon variety on the local market, and (3) demonstrating public picking of strawberries for home processing. Horticulturalists at the university believed iceberg lettuce could be produced in Northern New Hampshire. If the crop was ready for market in August and September, it could be marketed in New Hampshire and Boston outlets when competition from other lettuce producing areas was at a minimum. One farmer cooperated in a test demonstration. Excellent quality iceberg lettuce was produced. Local distribution brought favorable reports as to quality and in Boston a trial shipment sold above prices for competitive lettuce. This farmer is expanding his operations this season and the extension service is encouraging the further development of lettuce and other cool weather crops.

In New Hampshire plant breeders had developed a watermelon which could be produced there but was smaller in size than those from earlier commercial producing areas. County extension agents handling the production recommendations encouraged producers to make a commercial planting of the new watermelons while the marketing specialist from the college arranged with retailers to handle the melons during the season. Both the grower and the retailer had to be sold on this innovation which has worked out to the satisfaction of all concerned.

Consumer reaction to the new midget melons is satisfactory and justifies the educational program that was set up to try out a new product which adds to the income of some New Hampshire farmers. Arrangements have been made with additional farmers and retailers to sell an expanding volume of midget watermelons. An initial trial will also be started for Granite State Muskmelons, a new variety adapted to New Hampshire climatic conditions.

Difficulties of securing labor for strawberry picking limits the expansion of the industry in New Hampshire. In a trial demonstration where consumers could pick their own strawberries, pay a lower price for the fruit and use more for home processing, the results of an organized approach to this problem justifies a similar demonstration in a different area. With both harvest labor and local marketing problems solved in this manner, individual farmers could increase their strawberry acreage.

Utah has recognized that an opportunity exists to encourage an expanded local use of seasonal surplus supplies of fruits. They have kept local housewives informed of the coming harvest dates and encouraged home canning and freezing of the tree ripe fruit. Last year when commercial canneries faced a heavy carry-over of the previous season's pack and did not buy the farmer's fruit in volume, the extension program for home processing of cherries and apricots prevented a complete loss for growers.

Two of the territories, Puerto Rico and Hawaii, also started this type of educational work in marketing. Puerto Rico is trying to expand the local market for fruits and vegetables through a two fold approach:

- (1) Educational programs with producers to standardize quality and

improve distribution of locally produced products, (2) consumer education and market information programs to encourage greater use of seasonal supplies of fresh fruits and vegetables in the diet. This is part of combined effort of the Insular Department of Agriculture, the Experiment Station and the Extension Service to develop a well rounded program on marketing and distribution of agricultural products on the Island. The Island was divided into nine districts with a special agent in marketing in each. Training programs were organized for these agents in principles of marketing, use of outlook information, functions of cooperatives and extension methods. Almost all extension methods were used. Planning meetings were held to discuss major marketing problems followed by local meetings with farmers and handlers of produce. The agents had many visits from farmers and others on marketing problems. This work was closely related to the consumer education project. Joint arrangements were made for daily bulletins at information centers on market places. Close cooperation was maintained with PMA and CCC in establishing for the first time in Puerto Rico the sale of tobacco by U.S. grades. The marketing agents cooperated with the Insular Department of Agriculture in studying the marketing facilities of the Island.

Hawaii is now engaged in the development of markets for papayas, fresh pineapples, flowers and decorative foliage. Starting in California, contact was established with the various mainland commercial firms and government agencies directly concerned with the varied phases of merchandising Hawaiian fruits, vegetables, flowers and foliage. Transit experimentation and coordinated shore tests were undertaken for these products. As a result of facts established from the first shipment of papayas, a leading shipper adopted the practice of using

excelsior to reduce bruising. Other test shipments revealed proper harvest maturity and possibilities of using a plastic wax to extend storage life and a mold inhibitor to prevent rot. Sales promotion campaign possibilities were also investigated and reported.

Fresh pineapple shipments were observed on coast markets and the problem of decay and fermentation turned over to research agencies.

The test shipments of orchids by air freight will be conducted at the seasonal production peak to find means of reducing color fading and try out lighter containers. Test shipments of red and green ti leaves, croton leaves, and phothos leaves show that shipment by steamer chill storage is as satisfactory as the more expensive air freight. A territorial survey of the seasonality of export flowers and foliage is now under way.

Practically all these initial efforts of extension marketing projects to expand and create new market outlets did not include the major fruit and vegetable commodities.

Encouraging Efficiency and Orderly Marketing

Six States have developed their projects in fruit and vegetable marketing toward encouraging efficiency and orderly marketing to reduce waste, maintain quality and lower costs of distribution. The work in these States has centered upon several important commodities and attempts have been made to secure fairly widespread adoption of results of research and economic analysis as well as introduction of improved practices and marketing methods.

In New York State major activities have included demonstrations and educational work in connection with the marketing of (1) sweet corn to maintain sugar content from farm to consumer: (2) peaches to reduce losses and waste in handling and to effect the orderly marketing of

595(6-50)

tree ripened fruit; and (3) apples to reduce bruising from handling when packing and retailing the fruit. Particular emphasis was given to assembling and publicizing information on waste and spoilage of fruits and vegetables at retail.

In two years Massachusetts has organized a fruit and vegetable marketing program along broad lines with wide spread cooperation of extension personnel, farm leaders and key members of the produce trade. The subject matter teaching has centered on (1) training of county agents, (2) leader training and (3) technical assistance with special problems. The agent training has been carried along the lines of: (1) training in action with specific marketing problems, (2) tours to the markets, (3) conferences for specialists, tradesmen on specific problems, (4) development of a marketing program with commodity committees, (5) a training letter, (6) an intensive marketing school, (7) through marketing conferences. Leader training has included participation with commodity committees and grower associations as well as distributing information to selected marketing leaders. The technical assistance has been given on special marketing problems of the following: (1) Connecticut Valley asparagus, (2) Cape Cod strawberries, (3) cranberries, (4) apples, (5) blueberries, (6) lettuce, carrots, celery, (7) potatoes, (8) roadside stands, (9) Boston market facilities.

Intensive work in the marketing of Connecticut Valley asparagus, Cape Cod strawberries, state-wide apples and more recently state-wide potatoes has furnished opportunities to work closely with county agents on specific marketing problems. This work was organized to indicate the responsibilities of the county agents and cooperating specialists. Observations were made from the field and orchard through the market and recommendations have been placed before growers at meetings, by letters, radio and other extension means for the improved marketing

595)6-50)

of these crops.

The subject matter material required for this work in marketing required the development of background statistical information, the interpretation of current market movements and the constant close contact with marketing agencies. The statistical materials prepared on marketing apples provided the basis for developing a program for the orderly marketing of the 1949 apple crop, the largest in 25 years. The storage situation indicated that the movement out of storage would have to be twice the magnitude of the previous two years. Information was prepared and widely disseminated to carry the story to growers as they could plan sales programs and seek new and additional outlets for apples. Week to week developments in the market were relayed to county extension offices and to growers. Apple price and supply statistics were analyzed to guide farmers in planning the marketing of their crop. A special survey of market outlets showed new opportunities for selling the large crop of apples. Results show that fruit growers responded to this factual presentation of a difficult marketing situation when handled in an aggressive manner through an educational program.

Rhode Island worked mainly with farmers and handlers. Major attention was given to developing an understanding by farmers of U.S. Standards and Rhode Island Grading regulations for apples. This educational work was necessary in connection with apple marketing activities involving the use of consumer packages and master containers. Close cooperation was maintained with the experiment station which was conducting research work on consumer packages for apples.

In vegetable marketing, demonstrations were arranged with growers to show hydro-cooling, grading, packaging and icing of sweet corn. A survey of local marketing of sweet corn was made during the past season which revealed that only half of the retail outlets were handling

production programs involving concentration of production, increasing yields, and improving quality with a marketing program for better storage, proper grading, improved packaging and wider distribution of the produce. Work on sweet potato marketing was conducted through ten organized production and marketing facilities. Assistance was given to groups and agencies interested in adding improved facilities where needed to effectively promote better practices of handling, grading and packing sweet potatoes for market.

Special studies have been made of market conditions from important cities along with grades and sizes desired. This has resulted in obtaining new market outlets. The volume of sweet potatoes produced and marketed from the 1949 crop more than doubled that for the previous year.

Until 1949 sweet corn marketing in Mississippi was organized for production and marketing in only two areas. Through the efforts and assistance of RMA personnel and the cooperation of both extension production personnel and members of the State Marketing Commission, three new areas have been added. Production has increased from less than 200 acres before the development of the RMA program to over 3000 acres this current season.

The personnel of this RMA project has been, to a great extent, instrumental in the expansion of this program. They have contacted buyers in the larger markets, such as Chicago, Cincinnati, St. Louis, Pittsburgh, Kansas City, Memphis and other markets. They have also made a study of packs and grades on these markets and succeeded in getting the proper information to the producers, through demonstrations in the fields and on the packing sheds. County agents, managers and directors of the organized associations received counsel regarding better methods of handling, packing, and grading for the various market areas.

Using the Hattiesburg market facilities already developed as the focal point for a coordinated production and marketing program, the Mississippi Extension Service inaugurated work on grade improvement and handling in the surrounding production area. Attention was given to encouraging the development of more and better service from existing marketing agencies serving farmers. Some shipments have been combined to facilitate full loads. The number of farmers using the market has increased three times within the year this project has been in operation. They are obtaining marketing information not previously available, are raising the grade of their product and enjoying better prices.

Tennessee is developing a new approach to educational work by using a refrigerated truck to demonstrate shipping quality produce from producing area to retail outlets in distant markets. Major attention is being given to strawberries, tomatoes, snap beans, and sweet potatoes. Since the project was staffed late in the season, activities were mainly centered on (1) grower-buyer meetings on harvesting and maturity standards for tomatoes; (2) demonstrations of harvesting, handling into storage, and grading sweet potatoes; (3) recommendations of new varieties of snap beans in relation to quality and market outlets; (4) studying market procedures and establishing arrangements for test shipments by refrigerated trucks of strawberries, tomatoes and snap beans. Demonstration shipments via refrigerated truck are under way this season as a result of previous planning.

Washington has utilized the results of research in handling methods together with the best practical operations in the development of visual materials, color pictures, and film strips to show producers and handlers improved methods of harvesting, grading, packing, and merchandising apples. Two colored film strips with sound recordings were completed. The art work and script for two additional film

strips has been started. The showing of these visual materials to packing crews, together with actual demonstrations, was favorably received by managers and foremen.

Arkansas has started educational work to encourage processors to purchase and growers to sell vegetables for processing on a grade basis. To show the value of improving the quality and increasing yields per acre, demonstrations were set up in several important areas. Coordinated production and marketing recommendations were the basis of the demonstrations.

In 1949, the results from one group of tomato production demonstrations were uniformly excellent. Yields of from 10 to 16 tons of marketable tomatoes were obtained whereas the state average is 2.3 tons per acre. The processor used a private inspector to grade the raw product instead of a Federal-State Inspector and paid a \$10 per ton premium price for high quality tomatoes. The processor received approximately 50 per cent No. 1's, 45 per cent No. 2's and 23 per cent culls received in 1948 at Arkansas plants where the flat-rate system of payment was used. The canned pack graded 60 per cent Extra Standard and 40 per cent Standard compared to the state average of 14 per cent Extra Standard, 62 per cent Standard and 24 per cent Sub-Standard.

This year several processors have arranged with their growers to pay a premium price for high quality raw products. This practice is a step toward the objective of this project and probably will result in processors using Federal-State Inspection and purchasing on the basis of U.S. grades.

Maine and North Dakota, two important late potato producing States have concentrated their RMA project on this commodity. Maine has emphasized better handling of potatoes at harvest by use of rubber padded barrels and bin loaders to reduce mechanical injury. Particular

attention has been given to improving the quality and uniformity of potatoes in consumer size packages.

North Dakota has developed an excellent educational program for growers and shippers of potatoes. Attention has been given to better handling at harvest and into storage. The possibilities of washing and waxing potatoes have been promoted. The feeding of low grade and surplus potatoes to livestock has been encouraged through a concentrated educational program. The whole marketing project is closely integrated with the Extension Services regular production program. In two years that this marketing work has been under way, accomplishments can be summarized as follows:

1. Tuber injury and bruising have been reduced nearly 50 per cent as the result of handling improvements becoming more general in field and warehouse practice.
2. Early demonstration work has helped to develop a growing practice of disposing of low-grade and/or surplus potatoes (withheld from the tablestock market) as livestock feed.
3. A well-organized program in adult marketing education has been developed with growers, shippers, and market handlers through annual marketing clinics, tours of Chicago market, use of area, county and community potato associations and winter-dinner discussion meetings to supplement summer-tour demonstration field days.
4. County extension agents have become better informed on the nature of potato marketing as a whole institution and the economics behind or involved in practice changes they are concerned in helping to bring about in their counties.
5. The development of a strong grower organization which aids in

furthering the effectiveness of all extension, research, regulatory and service program activity directed toward better marketing and market returns for the potato industry.

6. Valuable experience has been gained that can be used in integrating marketing education with the work of others in and outside of the Extension Service in the cooperative attack on other marketing problems that are presently requiring attention.

This extension marketing program is showing results in the improved quality of potatoes now being shipped from the Red River Valley area. Although Minnesota does not have an FMA project on potatoes this State is cooperating closely with North Dakota by using regular Extension funds for this work.